Section 6.3

Fault Finding

List of Content

1. General 1
1.1 Show Error 1
1.2 Diagnostic Mode 2
1.2.1 General Information 2
1.2.2 Scanning & Signals 3
1.2.3 Mechanical Modules 4
1.2.3.1 Cassette Module 4
1.2.3.2 IP-Alignment 6
1.2.3.3 IP-Transport & Vacuum 8
1.2.3.4 Scan Unit 10
1.2.4 Erasure Unit 12
1.2.5 Image Transmission 12
1.3 Checks Mode 13
2. Most frequently occurring Errors 15

1. General

An error code occured:
Then you have two possibilities:
First:
Service mode
⇒ **<Show error>**
⇒ **<Explain error code>**

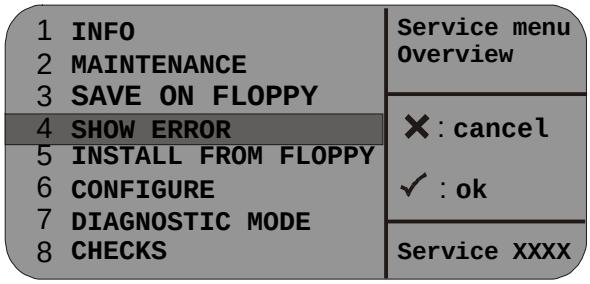
Second:
Service mode
⇒ **<Checks>**
⇒ **<Quick check>**
With this two software modules you can locate the hardware module where the error occurs.

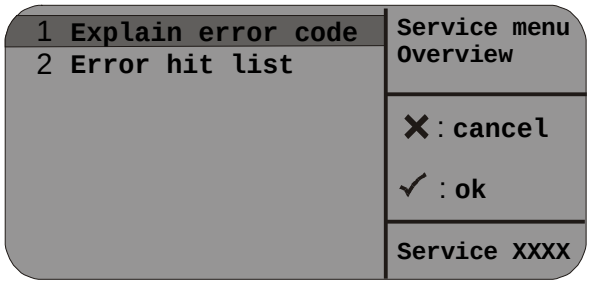
Then continue with
<Diagnostics>
<xxxxx>
XXXXX stands for the module you located the error before:
Scanning & signals or
Mechanical modules or
Erasure unit or
Image transmission

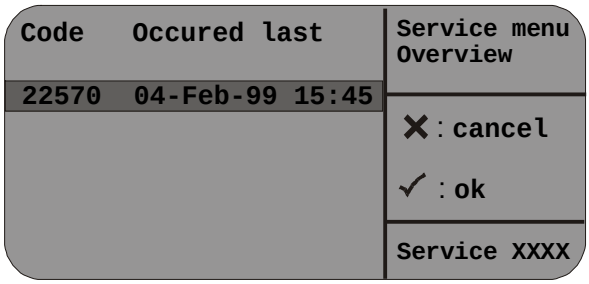
Before you start you have to remove the right side panel and put in the service key:

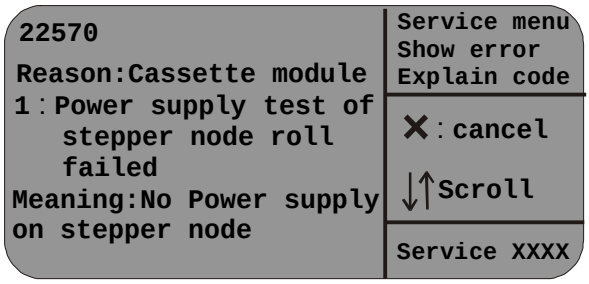
1.1 Show Error

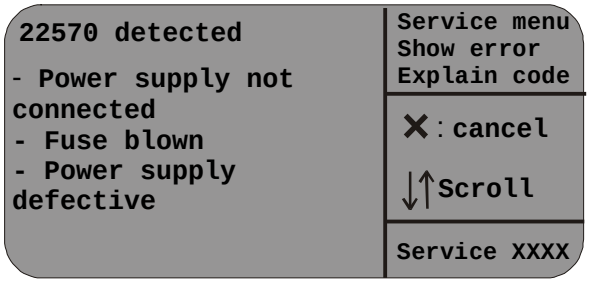
This software only shows the error code with explaining the code
like IMOS.
Example:

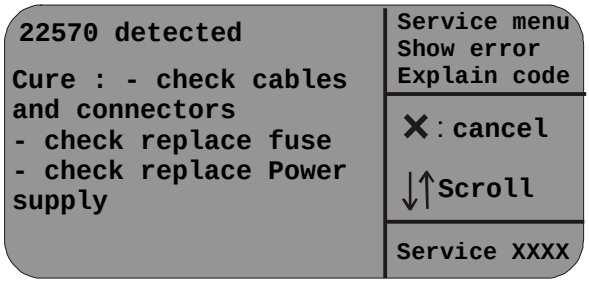












1.2 Diagnostic Mode

1.2.1 General Information

The diagnostics software helps the service technician to find defective parts in the machine:

- It guides the service technician through the complete test of a module.
- It is an interactive tool, which uses automatic self-tests (e.g. is stepper motor connected?) , questions like "Did the motor run?" and requests like "Put a cassette into the input buffer" to test all components (boards, motors, valves, mechanics,...) of a module. If the test was finished without problem, the technician can be sure that the module is working in normal operating mode too.

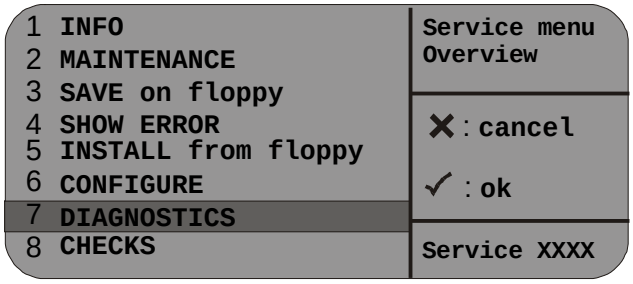
The diagnostics software

- finds disconnected or defective cables
- finds wrong bus-addresses (displays the correct one)
- finds wrong jumper-settings

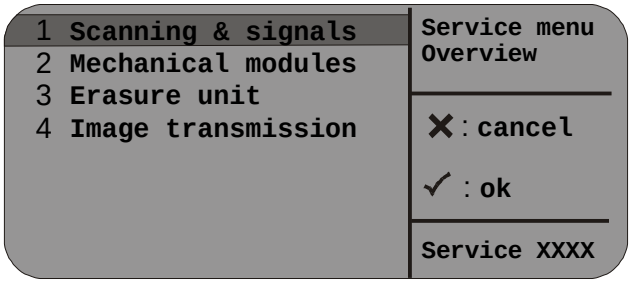
- finds defective boards
- finds defective motors
- finds defective mechanics (belts, springs,...)
- finds defective power supplies, fuses
- checks adjustments
- uses the same names for components as used in the circuit diagrams and in the service documentation (e.g. GS932-INPBUFF-DOOR-BD) to find the position of the component in the machine very fast
- displays the spare part number of a defective component (if available)

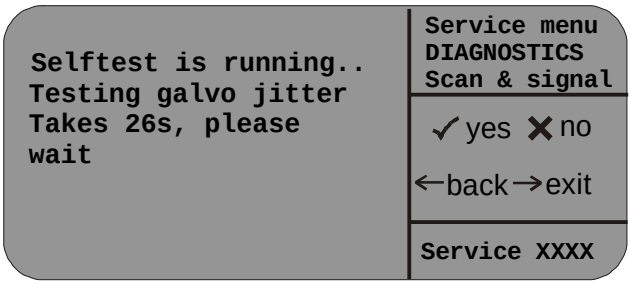
This software does **NOT** find sporadic problems (like sporadic bus crashes or bad connections)

If you have found a defective part with the diagnostic software exit the program, do the reparation, and start the program again. This is very important because otherwise the software guides you wrong.

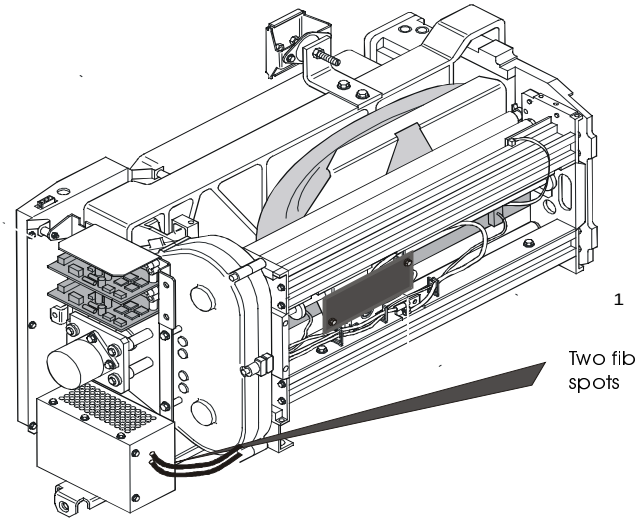


1.2.2 Scanning & Signals





Is the brihgtness of both fibre spots even?	**Service menu** **DIAGNOSTICS** **Scan & signal** ✓ yes ✗ no ←back→ exit **Service XXXX**



515563ae.cdr

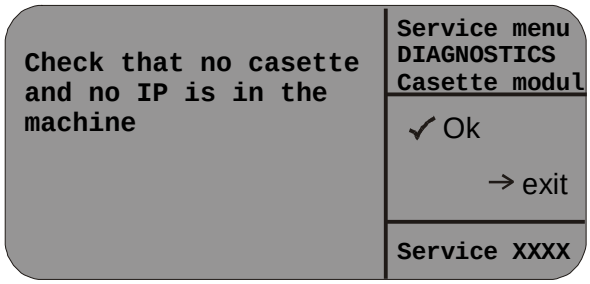
Please continue to follow the online displays.

1.2.3 Mechanical Modules

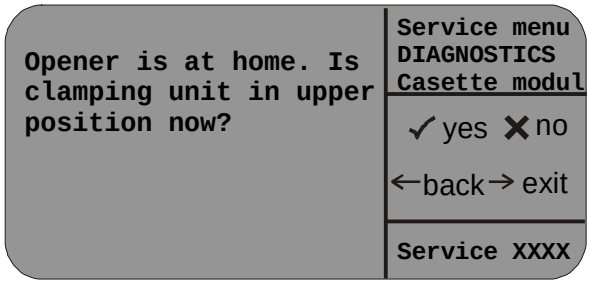
1 **Scanning & signals** 2 **Mechanical modules** 3 **Erasure unit** 4 **Image transmission**	**Service menu** **Overview** ✗ : **cancel** ✓ : **ok** **Service XXXX**

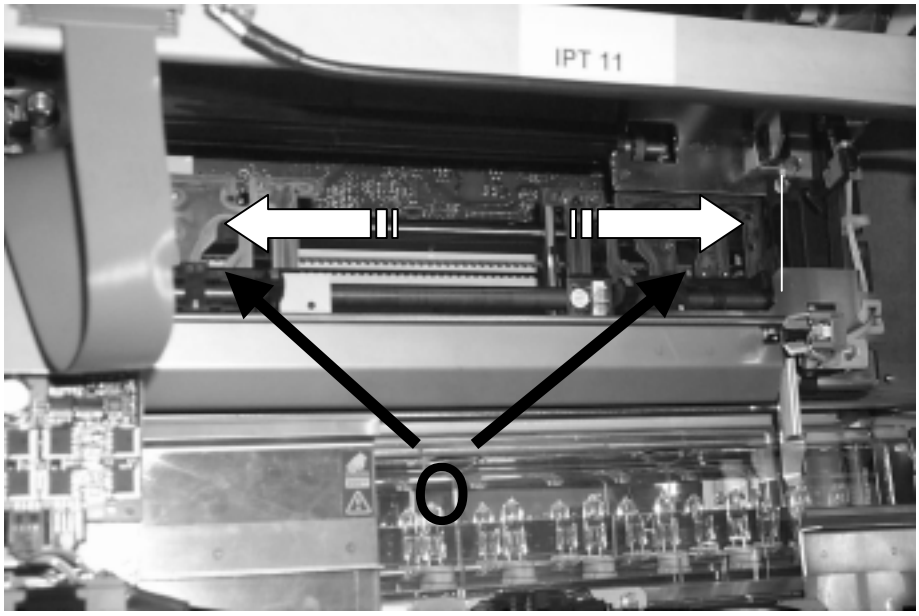
1.2.3.1 Cassette Module

1 **Casette module & R/FTag** 2 **IP-Alignement** 3 **IP-transport & vacuum** 4 **Scanner**	**Service menu** **Overview** ✗ : **cancel** ✓ : **ok** **Service XXXX**

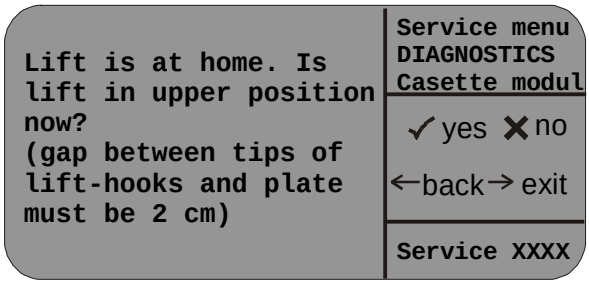


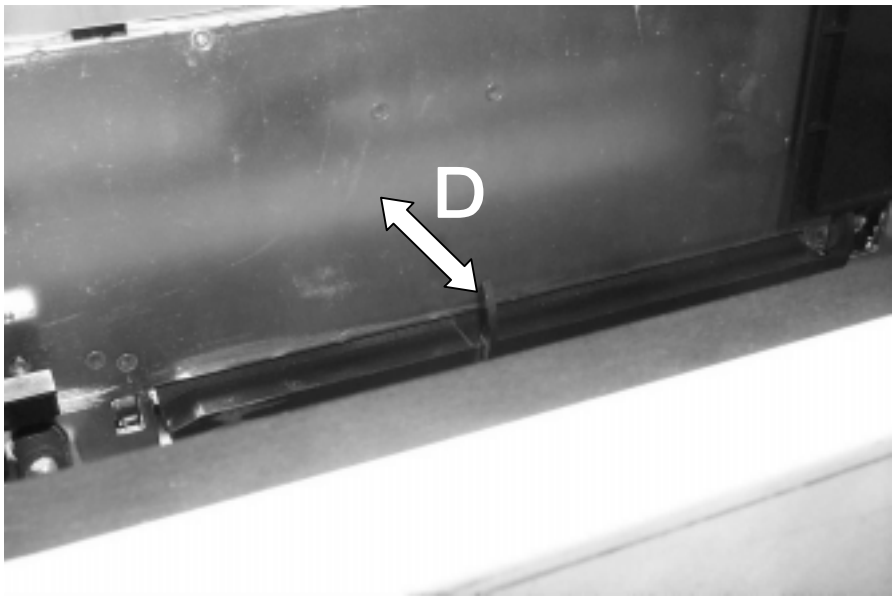
The above Display appears always at the beginning of the mechanical diagnostics. If a casette is in the machine, exit the program, and switch off and on the machine.





Opener (O) is moving to the home position

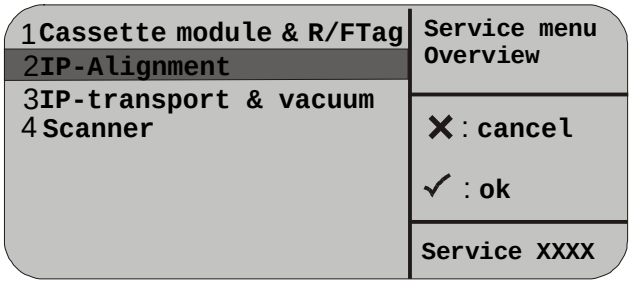

Lift is at home. Is lift in upper position now?
(gap between tips of lift-hooks and plate must be 2 cm)
Service menu
DIAGNOSTICS
Casette modul
✓ yes ✗ no
←back→ exit
Service XXXX

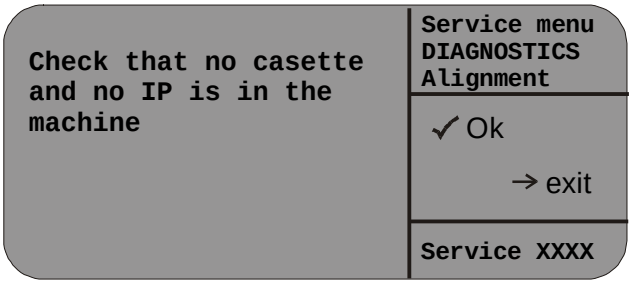


The gap (D) between tips of the lift hook and the plate have to be 2 cm.

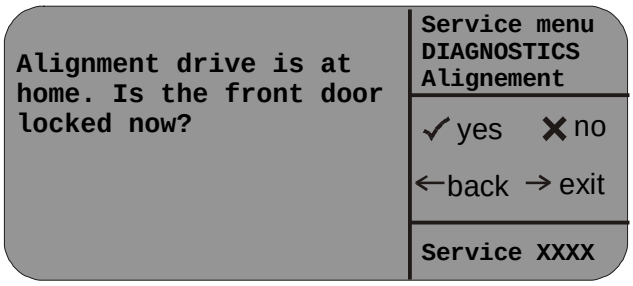
Continue with following the online messages.

1.2.3.2 IP-Alignment

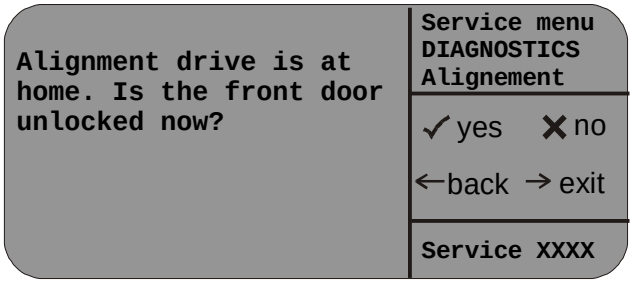




If a cassette is in the machine, exit the program, and switch off and on the machine.

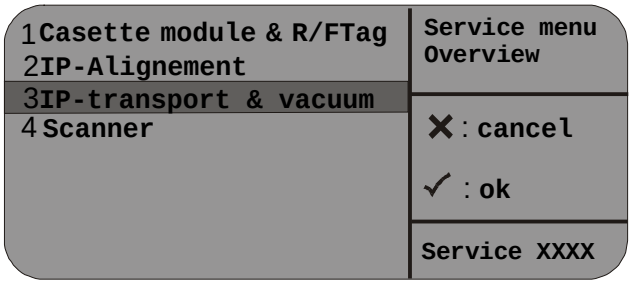


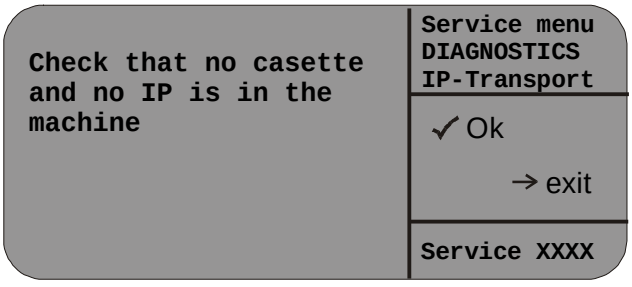
- Test with fingers wether front door is locked now.



- Follow the online instructions

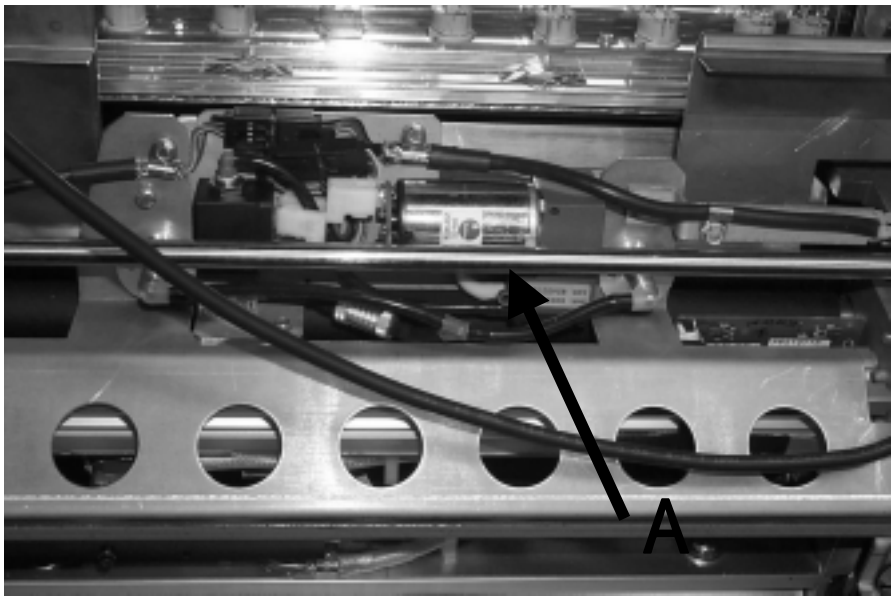
1.2.3.3 IP-Transport & Vacuum





- If a casette is in the machine, exit the program, and switch off and on the machine.

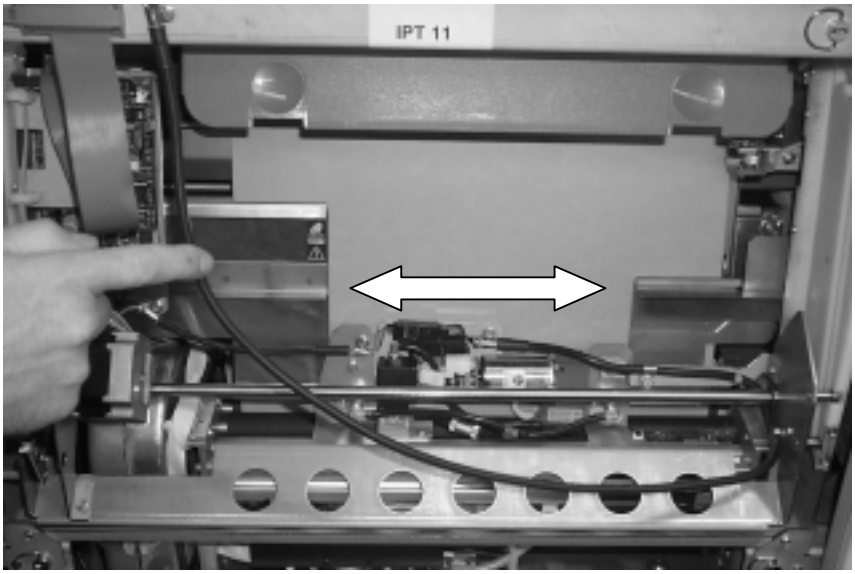
Vacuum pump GS608-VACUUM PUMP is switched off and MUST NOT run. Is pump off?	**Service menu** **DIAGNOSTICS** **Alignement** ✓ yes ✗ no → exit **Service XXXX**



If suction pump (A) is running you will hear a significant pump noise.

Press ✓ to test vacuum unit. Takes max. 10 s.	**Service menu** **DIAGNOSTICS** **IP-Transport** ✓ ok ←back → exit **Service XXXX**

Do both cups suck the IP now (rattle at IP)	Service menu DIAGNOSTICS IP-Transport ✓ yes ✗ no → exit Service XXXX



Vaccum released. Is IP free now without vacuum (rattle at IP)?	Service menu DIAGNOSTICS IP-Transport ✓ yes ✗ no → exit Service XXXX

1.2.3.4 Scan Unit

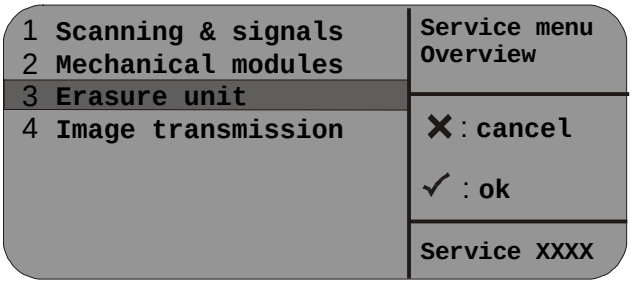
1 Casette module & R/FTag 2 IP-Alignement 3 IP-transport & vacuum 4 Scanner	Service menu Overview ✗ : cancel ✓ : ok Service XXXX

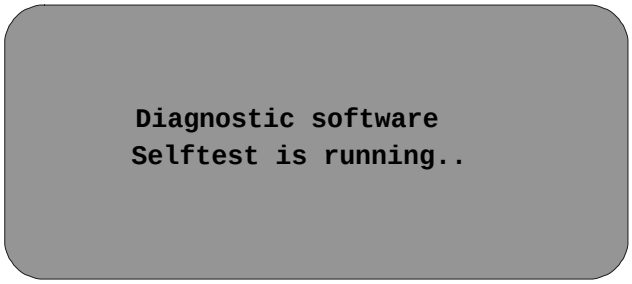
Press ✓ to run scanner rollers backwards for 12 s.	Service menu DIAGNOSTICS Scanner ✓ ok → exit Service XXXX

Did the front scanner roller rotate?	Service menu DIAGNOSTICS Scanner ✓ yes ✗ no ← back → exit Service XXXX

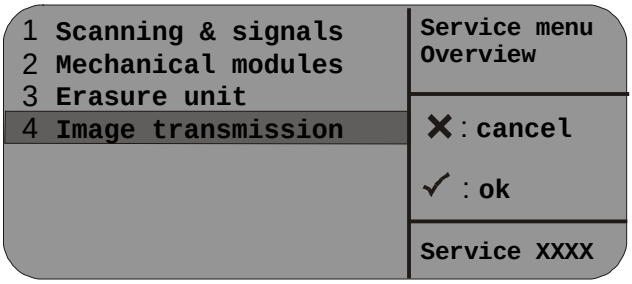
Test: Interrupt light barrier GS446-SCAN-IP-DEFLS below upper rollers with opaque material (e.g. twice folded paper)in the next 20s; press ✓ to start timer	Service menu DIAGNOSTICS Scanner ✓ yes → exit Service XXXX

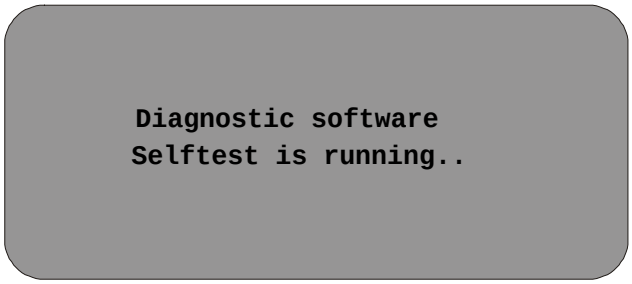
1.2.4 Erasure Unit





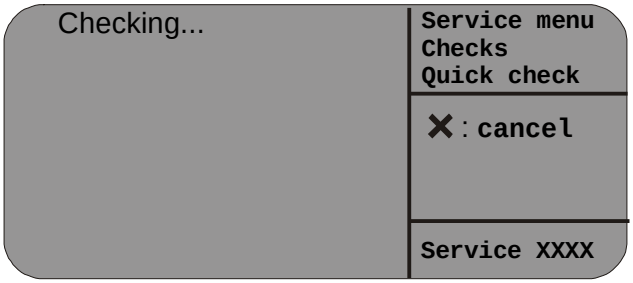
1.2.5 Image Transmission

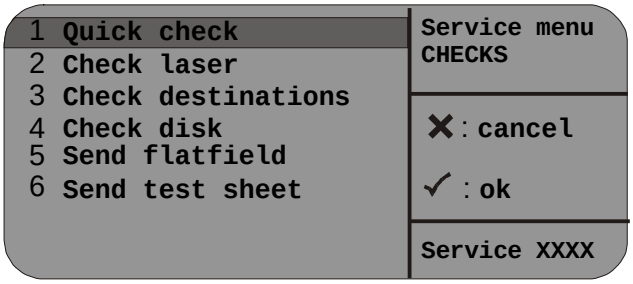


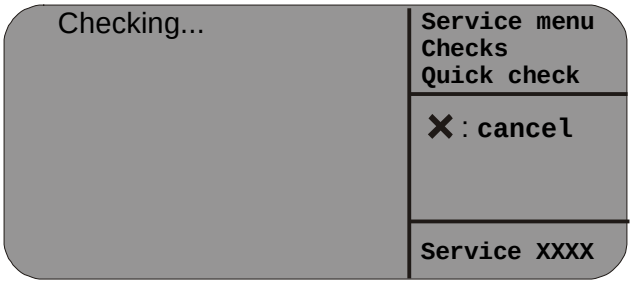


1.3 Checks Mode

- runs only a self-test of boards which belong to the module
- executes all module functions (e.g. open the cassette) in the same order as in normal operating mode
- does NOT search the reason for a problem: if an error occurs during the test, it displays the error code (e.g. 22ED8) and terminates the test
- does NOT give a repair proposal
- does NOT print spare part numbers of defective parts







2. Most frequently occurring Errors

The errors shown in the list are the most frequently occurring errors during product observation phase. The list will be updated regularly at DigiNet / MedNet. For additional information, or to add another error, please contact to MI_CSO.

Error-Code	Interpretation	Comments	On-going research
247A7 / 247AA	Postscan IP-jam	1. See Section 13 / FSB 16 (DD+DIS082.01E) 2. Upgrade to SOL_1302, see Section 10 (DD+DIS154.01E)	✓
243D9	Suction cups get no vacuum after scanning while taking up the IP from transport unit to cassette unit	1. Check guide plate position in transport unit. 2. Exchange the vacuum-pump.	✓
247A6	IP-jam before scanning	1. IP is blocked in the scanner-mirror: Check IP type (MD30 IPs sometimes cause this problem). 2. IP is still in the cassette and this error-code appears: The vacuum-pump is defective, exchange the vacuum-pump. 3. IP is blocked in the first rollers pair, there is a problem with the roller-lift motor: Check the mechanism, replace it together with motor if necessary. (R&D works on a modification) 4. Upgrade to SOL_1302, see Section 10 (DD+DIS154.01E)	✓
20604	No pixel arriving within a certain time during scan	1. This error is written in the info-counters but is not displayed on user-interface: No specific action. 2. If this problem appears on the user-interface: Exchange SCB-board.	
20605	Timeout while waiting for new image blocks, but image block ring-buffer already filled	1. This error is written in the info-counters but is not displayed on user-interface: No specific action. 2. If this problem appears on the user-interface: Exchange SCB-board.	
243CD	SMH-test power failed / Transport section	1. Si2-2,5 A is blown: Exchange Si2. 2. Transport unit stepper-motor board defective: Exchange board.	
2438F / 243B6	IP-jam in prescan and blinking cursor on the display	Electrostatic problems: Install ESD Brush (also called Discharge Brush, CM+9.5155.9220.0)	